

## Claims

1. A method of determining track occupancy of a train after the train has passed through a turnout onto either of a first or at least a second track, comprising the steps of:

inertially sensing linear and rotary acceleration associated with the movement of a train over a trackway;

determining, either directly or indirectly, distance traveled over the trackway;

establishing, in an optimal estimator, a first computational instance for the first track and a second computational instance for the second track using predetermined track parameters,

effecting the continued processing of each of the first and second computational instances computing at least the location of the train and/or values related thereto by derivation or integration and the corresponding estimated error states until one of the first and second computational instances exhibits pre-determined features in its estimated error states indicating that the track for that instance is not the track occupied by the train.